AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A process for processing OFDM-signals, comprising the steps of:

~~received~~ receiving substantially simultaneously the OFDM-signals by a multi-antenna system with two or more corresponding separate receiving channels;~~, wherein,~~

in each separate receiving channel, obtaining the I/Q-values of each individual carrier of the OFDM-signals ~~are obtained~~ and determining channel correction values or confidence values ~~are determined~~ from pilots for each individual carrier of the OFDM-signals~~, wherein~~;

deriving weighting factors ~~are derived~~ from the channel correction or confidence values for each I/Q-value of each individual carrier and each separate receiving channel, by which weighting factors the I/Q-values of each individual carrier of the OFDM-signals obtained in ~~the~~ an OFDM-demodulator are weighted such that I/Q-values of carriers received at a low level are weighted low and I/Q-values of carriers received at a high level are weighted high~~,~~; and ~~the thus~~

adding the weighted I/Q-values ~~are then added~~ and ~~divided~~ dividing the added weighted I/Q-values by the number of all the ~~weights~~weighting factors.

2. (Currently Amended) The process according to Claim 1, wherein the demodulated I/Q-values at the output of the OFDM demodulator are fed to a time synchronisation device so that the I/Q-values of corresponding carriers of the ~~individual~~ separate receiving channels are in each case simultaneously available for further processing.

3. (Previously Presented) The process according to Claim 1, wherein the I/Q-values of each individual carrier of the OFDM-signals are weighted as a function of the channel correction values obtained from the pilots, such that low weighting factors are selected for large channel correction values and high weighting factors are selected for small channel correction values.

4. (Currently Amended) The process according to claim 1, wherein ~~data words available downstream of a decision device are reduced to their original~~the weighted I/Q-values ~~and then~~are obtained by complexly ~~weighted~~ multiplying the I/Q-values with the corresponding confidence values.

5. (Previously Presented) The process according to claim 1, wherein each of the OFDM-signals received by the multi-antenna system has the same center frequency.

6. (Currently Amended) A method for receiving and processing OFDM signals, the method comprising the steps of:

receiving substantially simultaneously the OFDM signals by a plurality of antennas, each of the plurality of antennas having a separate receiving channel;

demodulating each of the received OFDM signals;

acquiring channel correction values or confidence values for each of the demodulated OFDM signals;

providing I/Q values for each of the demodulated OFDM signals;

determining a weighting factor for each of the I/Q values on the basis of the channel

correction values or confidence values associated with each of the OFDM signals;

weighting each of the I/Q values by the corresponding weighting factor;

determining a total weight by adding together the ~~weights~~ weighting factors of each of the weighted I/Q values;

adding together each of the weighted I/Q values for each of the demodulated OFDM signals; and

dividing the added weighted I/Q values by the total weight to determine a mean value, the mean value being utilized to maximize the signal to noise ratio of the received OFDM signals.

7. (Previously Presented) The method according to claim 6, wherein each of the separate receiving channels is set at substantially the same receiving frequency.